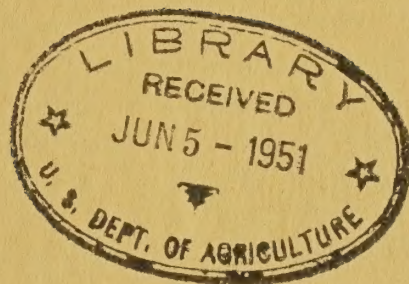


SPECIFICATIONS FOR STEP-DOWN SUBSTATION TRANSFORMERS FOR USE ON  
REA BORROWER SYSTEMS

5c  
January 16, 1951



2 U. S. Department of Agriculture  
U. S. Rural Electrification Administration.







NEW LISTING PROCEDURE FOR REA SUBSTATION TRANSFORMERSI GENERAL DETAILS

The Technical Standards Committee "A" will begin accepting data and requests for listing from the manufacturers as a prerequisite to the entering of their various substation transformer items on the "List of Materials Acceptable for Use on REA-Financed Systems."

The listings will be made by manufacturer, type, high voltage rating and size capacity in accordance with the specifications.

A period will be allowed for submitting data on which basis the determination for listing will be made. During this interim the existing procedure, with respect to the purchasing of these units by the various systems, will be carried on as before.

After November 1, 1951, all substation transformers covered by the new REA specifications will be approved for purchase by the systems of REA borrowers, only if the transformers appear on the "List of Materials Accepted for Use on REA-Financed Systems." Once a transformer is approved and listed, future units can be purchased by any system directly from the list.

II INFORMATION TO BE SUBMITTED BY THE MANUFACTURER

The following shall be submitted in presenting this item or group of items for consideration by Technical Standards Committee "A".:

1. Eight (8) copies of a request for acceptance of the item, or group of items, in the form of a letter, directed to The Chairman, Technical Standards Committee "A". This letter may request acceptance of a single type of transformer, a range of transformers, or a primary voltage group of transformers of various sizes. Also a copy of descriptive or catalog data should be included with each copy of the above letter.
2. One (1) copy of a brochure covering all the data on all the types requested for acceptance shall be submitted and shall contain the following information:
  - a) Complete certified test data covering all items and including a statement that the design has been impulse tested in accordance with NEMA or ASA Standards. If this impulse test was made by an agency other than the manufacturer, give name of agency, place and date tested.
  - b) Nameplate and internal connection diagram or drawings, covering all items.
  - c) Performance specification sheets similar to those approved by NEMA or ASA standards and covering all items.
  - d) Outline drawings covering all items indicating pertinent overall dimensions.
3. One (1) copy, if required, of any special additional information that might later be required by Committee "A".



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*[Faint handwritten notes at the bottom of the page]*



SPECIFICATIONS FOR STEP-DOWN SUBSTATION TRANSFORMERS FOR USE ON  
REA BORROWER SYSTEMS

I SCOPE

a) General--

These performance specifications cover step-down substation type transformers used to supply power to rural electric distribution systems. The transformers covered by these specifications shall be 60 cycle, single-phase and of the outdoor, oil immersed, self-cooled type with cover mounted bushings, dial type thermometer on all ratings and all standard National Electrical Manufacturers Association (NEMA) accessories.

II RATING

a) Capacity--

These specifications are intended to apply to single-phase transformers of the following NEMA standard kva ratings:

50 *	250	667
100	333	833
167	500	1000

\* Available in high voltage ratings of 43.3 kv and under.

b) High Voltage--

The nominal high voltage rating and full capacity tap range shall be one of the following:

<u>High Voltage Rating-kv</u>	<u>Tap Voltages-kv</u>
13.2	2-2 $\frac{1}{2}$ % above and 2-2 $\frac{1}{2}$ % below normal
13.8	14.4/14.1/13.8/13.5/13.2
22.9	24.1/23.5/22.9/22.3/21.7
34.4	36.2/35.3/34.4/33.5/32.6
43.8	46.2/45.0/43.8/42.6/41.4
67.0	70.6/68.8/67.0/65.2/63.4

c) Low Voltage--

The nominal low voltage rating shall be one of the following:

<u>Low Voltage Rating - Volts</u>
7200/12470 Y
7620/13200 Y
14400/24900 Y

III APPLICABLE STANDARDS

Transformers shall comply with "American Standards for Transformer, Regulators, and Reactors," ASA No. C57-1948-1949 and "Standards for Transformers," NEMA publications No. 48-132, September 1948 and revised August 1950, or any subsequent revisions thereto except where they conflict with the specific requirements of these specifications.



